

Date: Sun, 7 Aug 94 19:42:41 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #884
To: Info-Hams

Info-Hams Digest Sun, 7 Aug 94 Volume 94 : Issue 884

Today's Topics:

AMSAT ANS-218 BULLETINS
CHU Digital Transmission Format?
ORBS\$217.2L.AMSAT
ORBS\$217.MICRO.AMSAT
ORBS\$217.MISC.AMSAT
ORBS\$217.OSCAR.AMSAT
ORBS\$217.WEATH.AMSAT
Question from a NOVICE
S. California Repeaters

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 8 Aug 94 02:12:49 GMT
From: news-mail-gateway@ucsd.edu
Subject: AMSAT ANS-218 BULLETINS
To: info-hams@ucsd.edu

SB SAT @ AMSAT \$ANS-218.01
KO-25 KEPLERIAN ELEMENTS

HR AMSAT NEWS SERVICE BULLETIN 218.01 FROM AMSAT HQ
SILVER SPRING, MD AUGUST 6, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-218.01

KO-25 NASA Keps Track The Wrong Satellite

For the past several weeks many amateurs have noted that the NASA keps for K025 have not produced accurate AOS and LOS times observes AMSAT-NA Orbital Data Manager Ray Hoad (WA5QGD). With the help of W5IU, K5EKH, and KG5OA, numerous K0-25 passes have been observed in conjunction with other objects in the K0-25 launch group. The consensus of this study is that the object NASA tracks as Catalog #22828 may actually be K025.

In order to help remove this confusion, the keplerian elements for Catalog #22828 will be included (for the near future) in the weekly keplerian element set published on INTERNET. Please post any comments on the accuracy of the Cat. #22828 keps in tracking of K025 as messages addressed to WA5QGD on either K0-23 or K0-25 digital satellites. The NASA Orbital Information Group has been advised of the tracking problem with K025.

Note: The most accurate way to determine whether a transmitting satellite fits a set of keplerian elements is to observe the frequency of the satellite's transmission at the Time of Closest Approach (TCA). For low orbit birds, this corresponds to the time of maximum elevation given by most tracking programs. At this time there will be no doppler shift and the transmission frequency should match the published channel frequency (assuming no shift due to other causes). If a set of keps meets these requirements, it is a good match for the satellite. This method will give more consistent results than the AOS/LOS method.

[The AMSAT News Service (ANS) wishes to thank Ray Hoad (WA5QGD) for this bulletin item.]

/EX

SB SAT @ AMSAT \$ANS-218.02
SSTV ON OSCAR 13

HR AMSAT NEWS SERVICE BULLETIN 218.02 FROM AMSAT HQ
SILVER SPRING, MD AUGUST 6, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-218.02

SSTV ON OSCAR 13

Slow scanners are invited to join the SSTV sessions on AMSAT-OSCAR-13 (AO-13). The frequency is 145.955 MHz. The Net meets at 45 minutes before Mode S, and on Mode B following Mode S on Saturdays and Sundays. Join these sessions or contact wb6llo@amsat.org for other skeds and he will coordinate your efforts.

DATE	TIME
13-AUG-1994	15:50UTC and 17:55 UTC
14-AUG-1994	14:43UTC and 16:48 UTC

Please disseminate widely: clubs, local nets, etc.

/EX

SB SAT @ AMSAT \$ANS-218.03
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 218.03 FROM AMSAT HQ
SILVER SPRING, MD AUGUST 6, 1994
TO ALL RADIO AMATEURS BT
BID: \$ANS-218.03

Weekly OSCAR Status Reports: 06-AUG-94

AO-13: Current Transponder Operating Schedule:

M QST *** AO-13 TRANSPONDER SCHEDULE *** 1994 Jul 11 - Sep 12

Mode-B : MA 0 to MA 90 | Omnis : MA 230 to MA 30
Mode-BS : MA 90 to MA 120 |
Mode-S : MA 120 to MA 122 |<- S beacon only
Mode-S : MA 122 to MA 145 |<- S transponder; B trsp. is OFF
Mode-S : MA 145 to MA 150 |<- S beacon only
Mode-BS : MA 150 to MA 180 | Blon/Blat 180/0
Mode-B : MA 180 to MA 256 | Move to attitude 230/0, Sep 12

=====

N QST *** AO-13 TRANSPONDER SCHEDULE *** 1994 Sep 12 - Dec 19

Mode-B : MA 30 to MA 150 |<- OFF Oct 22 - Nov 07 for eclipses
Mode-B : MA 150 to MA 190 | max duration 2h 12m
Mode-BS : MA 190 to MA 218 |
Mode-S : MA 218 to MA 220 |<- S beacon only
Mode-S : MA 220 to MA 230 |<- S transponder; B trsp. is OFF
Mode-B : MA 230 to MA 30 | Alon/Alat 230/0
Omnis : MA 250 to MA 140 | Move to attitude 180/0, Dec 19

The battery charge state is of paramount importance during the eclipse seasons. As always the command team may have to have to make temporary changes to the published schedule. In that case we will try to minimize the inconvenience, setting Mode-B OFF from MA 230-256 in the first instance.

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[G3RUH/DB20S/VK5AGR]

DO-17: DOVE is running a new set of software that tests the digital-to-analog converter (DAC) and other hardware and software capabilities. It plays digitally generated tones through the DAC and exercises software that implements two way communications between the on-board processors. [WD0E for the DOVE Team]

RS-10: RS-10 has been working very well. Lots of activity with 2 stations worked /MM I6KYL/MM EL27 and N1KTM/MM EL67. Also on the 28-JUL-94, WC9C

heard the station KC6VRK who was on AO-13 as RS-10 pass underneath right after AO-13 went through its perigee; his signal was very strong on the 10M downlink. The CW Robot is back up and working just fine. Also, WA6ARA reports that RS-10 has been sending down excellent signals at his QTH with lots of stations using CW. [WC9C & WA6ARA]

AO-10: After last week's glowing report about AO-10 sending down excellent signals, ZL2TP0 reports that AO-10 has started to "FM" very badly. Up until last week it has been operating quite well and there have been a number of stations operating. Please note that when AO-10 is "FMing," please refrain from using it. [ZL2TP0]

KO-25: WH6I reports that KO-25 was in some sort of "loader-mode" earlier in the week. Today, however, the BBS seemed to be working again, but he was unable to send any commands to it. WH6I has not seen anything to indicate what is going on. [WH6I]

LO-19: LUSAT-OSCAR-19 (LO-19) is still not running its BBS. [WH6I]

IO-27: WH6I still has not heard anything from ITAMSAT. [WH6I]

AO-16: Still going strong and very doing well. There is some gateway traffic on AO-16 but not enough to present any problem to other users and the file lifetime on the bird is still quite long. [WH6I]

KO-23: KO-23 is going strong and doing well. [WH6I]

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send your observations to WD0HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, WD0HHU @ N0QCU. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

/EX

Date: 7 Aug 94 13:33:04 GMT
From: news-mail-gateway@ucsd.edu
Subject: CHU Digital Transmission Format?
To: info-hams@ucsd.edu

I read here recently that CHU in Canada digitally broadcasts the time between the 30 and 40 second marks. Does anyone on here know the format of the data? I

recalled that the encoding is Bell 103 (300 baud) so I tried hooking up an old Hayes Smartmodem 1200 (which was designed with Hams in mind) to see if I could receive anything at 300 baud FSK. No luck.

Thanx!

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*****
* Robert G. Schaffrath, N2JTX   * Internet:   rgs%wpmax2%gfminda@uunet.uu.net *
* Systems Engineer             * CompuServe: 76330,1057                 *
* Maxwell House Coffee Company * Phone:      914-335-2777                 *
* Kraft General Foods Corp.    * Slogan:      "ervice is ur mott"         *
*****
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Date: 5 Aug 94 04:37:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS\$217.2L.AMSAT
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-217.N
2Line Orbital Elements 217.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM WA5QGD FORT WORTH,TX August 5, 1994
BID: \$ORBS-217.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:
1 AAAAAU 00 0 0 BBBB.BBBBBBBB .CCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

For the past several weeks the keps for K025 have not been producing accurate AOS, TCA, and LOS times. It is my belief that a more accurate set of keps for K025 is the object NASA lists as Catalog Number 22828. W5IU, K5EKH, KG50A, and myself have confirmed this by monitoring numerous Cat No. 22828 passes. Below is the current keps for the object with Cat. # 22828. Try these out in your tracking program and see if they do a better job for K025. Please leave a message on K023 or K025 to let me know how this set works.
73 Ray, WA5QGD

A0-10
1 14129U 83058B 94215.22805310 -.00000302 00000-0 10000-3 0 2952
2 14129 27.0009 314.8290 6026240 199.5326 120.6764 2.05881876 83753

U0-11

1 14781U 84021B 94213.04189469 .000000067 00000-0 19144-4 0 7136
2 14781 97.7856 225.6656 0012585 122.2499 237.9928 14.69233978556892

RS-10/11

1 18129U 87054A 94213.27359705 .000000018 00000-0 35526-5 0 9324
2 18129 82.9271 295.5187 0010141 260.6002 99.4006 13.72339573356096

A0-13

1 19216U 88051B 94215.93255462 .000000363 00000-0 10000-4 0 9412
2 19216 57.7516 238.4314 7222331 347.2702 1.5691 2.09718789 47017

F0-20

1 20480U 90013C 94213.43350131 -.000000018 00000-0 39122-4 0 7108
2 20480 99.0410 356.7174 0539898 236.9611 117.8521 12.83226876209935

A0-21

1 21087U 91006A 94216.14915277 .000000093 00000-0 82657-4 0 4968
2 21087 82.9459 107.2296 0034831 313.1016 46.7226 13.74542801176172

RS-12/13

1 21089U 91007A 94213.38545202 .000000023 00000-0 87829-5 0 7133
2 21089 82.9223 337.9238 0029475 346.0088 14.0245 13.74044083174854

ARSENE

1 22654U 93031B 94205.08601395 -.000000142 00000-0 00000 0 0 2672
2 22654 1.9520 97.7392 2917162 186.8922 167.2050 1.42201946 1729

U0-14

1 20437U 90005B 94213.78039282 .000000010 00000-0 20896-4 0 157
2 20437 98.5893 297.9372 0011963 58.8472 301.3881 14.29850974236108

A0-16

1 20439U 90005D 94213.27445779 .000000003 00000-0 18064-4 0 8137
2 20439 98.5979 298.7190 0012267 60.0425 300.1970 14.29904960236047

D0-17

1 20440U 90005E 94213.78413741 .000000007 00000-0 19603-4 0 8144
2 20440 98.5988 299.5608 0012401 58.0788 302.1597 14.30044782236137

W0-18

1 20441U 90005F 94213.27050758 .000000001 00000-0 17366-4 0 8164
2 20441 98.5965 299.0502 0012910 60.7618 299.4853 14.30018823236060

L0-19

1 20442U 90005G 94213.73539692 .000000021 00000-0 25060-4 0 8123
2 20442 98.5995 299.7793 0013267 58.3596 301.8868 14.30115609236140

U0-22

1 21575U 91050B 94213.74571854 .000000013 00000-0 18775-4 0 5177
2 21575 98.4322 287.3167 0007877 147.7411 212.4257 14.36925651159626

K0-23

1 22077U 92052B 94213.41306658 -.000000037 00000-0 10000-3 0 4123
2 22077 66.0808 185.2892 0015350 275.1393 84.7872 12.86286851 92607

A0-27

1 22825U 93061C 94213.65198693 .000000007 00000-0 20768-4 0 3105
2 22825 98.6511 288.9979 0009583 74.8438 285.3810 14.27630722 44179

I0-26

1 22826U 93061D 94214.19032026 -.000000009 00000-0 14086-4 0 3102
2 22826 98.6515 289.5766 0010151 76.1180 284.1130 14.27735137 44254

KO-25

1 22830U 93061H 94213.62991027 -.000000035 00000-0 33681-5 0 3156
2 22830 98.5517 285.7863 0012449 45.9554 314.2653 14.28060707 44189

OBJ 22828

1 22828U 93061F 94213.76963000 -.000000006 00000-0 15345-4 0 2881
2 22828 98.6480 289.1772 0011104 62.6119 297.6185 14.28061411 12286

NOAA-9

1 15427U 84123A 94215.73515055 .000000117 00000-0 86262-4 0 9019
2 15427 99.0450 266.7740 0015871 84.8632 275.4348 14.13633304496979

NOAA-10

1 16969U 86073A 94215.76693453 .000000036 00000-0 33488-4 0 7974
2 16969 98.5081 223.3165 0012845 186.3620 173.7398 14.24900734409276

MET-2/17

1 18820U 88005A 94215.49523818 .000000028 00000-0 11549-4 0 3562
2 18820 82.5407 230.9503 0018360 50.0231 310.2527 13.84719219328905

MET-3/2

1 19336U 88064A 94213.59427610 .000000051 00000-0 10000-3 0 3096
2 19336 82.5400 291.5503 0017190 144.8154 215.4104 13.16968250289235

NOAA-11

1 19531U 88089A 94215.72629249 .000000075 00000-0 65427-4 0 7194
2 19531 99.1755 205.8097 0012225 4.3041 355.8230 14.13007420301857

MET-2/18

1 19851U 89018A 94213.75597542 .000000078 00000-0 56483-4 0 3105
2 19851 82.5213 107.5997 0015552 95.1060 265.1868 13.84370156273998

MET-3/3

1 20305U 89086A 94216.17052536 .000000044 00000-0 10000-3 0 1064
2 20305 82.5405 236.7979 0005331 169.6805 190.4389 13.04422901229155

MET-2/19

1 20670U 90057A 94213.41003535 -.000000029 00000-0 -39076-4 0 8133
2 20670 82.5455 172.5483 0017266 24.6776 335.5206 13.84189091206871

FY-1/2

1 20788U 90081A 94215.88224815 -.000000199 00000-0 -10331-3 0 311
2 20788 98.8366 234.5011 0014887 239.5385 120.4308 14.01350503200389

MET-2/20

1 20826U 90086A 94213.65208044 .000000094 00000-0 71501-4 0 8214
2 20826 82.5269 109.8175 0012367 286.6921 73.2884 13.83587320194046

MET-3/4

1 21232U 91030A 94213.31479971 .000000051 00000-0 10000-3 0 7205
2 21232 82.5437 137.6981 0014536 72.5269 287.7438 13.16463399157294

NOAA-12

1 21263U 91032A 94215.74541817 .000000114 00000-0 70397-4 0 1232
2 21263 98.6148 242.4707 0013903 97.3891 262.8867 14.22434851167266

MET-3/5

1 21655U 91056A 94216.15247496 .000000051 00000-0 10000-3 0 7291
2 21655 82.5535 82.8772 0014667 73.7291 286.5437 13.16832975142777

MET-2/21

1 22782U 93055A 94213.36733443 .000000042 00000-0 24627-4 0 3226
2 22782 82.5485 170.6331 0023958 97.1572 263.2315 13.83011259 46335

POSAT

1 22829U 93061G 94213.63587076 .00000017 00000-0 24413-4 0 3038
2 22829 98.6464 289.0556 0011121 64.8056 295.4279 14.28035335 44181

MIR

1 16609U 86017A 94215.25868965 .00003454 00000-0 54150-4 0 6952
2 16609 51.6479 310.9106 0001314 199.0571 161.0371 15.56735880483357

HUBBLE

1 20580U 90037B 94215.55612231 .00000376 00000-0 22280-4 0 5147
2 20580 28.4707 291.6986 0005951 222.2340 137.7788 14.90649965 36464

GRO

1 21225U 91027B 94213.54285849 .00001811 00000-0 36407-4 0 1228
2 21225 28.4628 277.2327 0003053 8.0790 351.9857 15.41105823 63949

UARS

1 21701U 91063B 94213.60346557 .00002536 00000-0 24185-3 0 5620
2 21701 56.9863 337.0641 0005480 110.3085 249.8537 14.96580625157736

/EX

Date: 5 Aug 94 04:32:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS\$217.MICRO.AMSAT
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-217.D
Orbital Elements 217.MICROS

HR AMSAT ORBITAL ELEMENTS FOR THE MICROSATS
FROM WA5QGD FORT WORTH, TX August 5, 1994
BID: \$ORBS-217.D
TO ALL RADIO AMATEURS BT

For the past several weeks the keps for K025 have not been producing accurate AOS, TCA, and LOS times. It is my belief that a more accurate set of keps for K025 is the object NASA lists as Catalog Number 22828. W5IU, K5EKH, KG50A, and myself have confirmed this by monitoring numerous Cat No. 22828 passes. Below is the current keps for the object with Cat. # 22828. Try these out in your tracking program and see if they do a better job for K025. Please leave a message on K023 or K025 to let me know how this set works.
73 Ray, WA5QGD

Satellite: UO-14
Catalog number: 20437
Epoch time: 94213.78039282
Element set: 15
Inclination: 98.5893 deg
RA of node: 297.9372 deg

Eccentricity: 0.0011963
Arg of perigee: 58.8472 deg
Mean anomaly: 301.3881 deg
Mean motion: 14.29850974 rev/day
Decay rate: 1.0e-07 rev/day^2
Epoch rev: 23610
Checksum: 317

Satellite: A0-16
Catalog number: 20439
Epoch time: 94213.27445779
Element set: 813
Inclination: 98.5979 deg
RA of node: 298.7190 deg
Eccentricity: 0.0012267
Arg of perigee: 60.0425 deg
Mean anomaly: 300.1970 deg
Mean motion: 14.29904960 rev/day
Decay rate: 3.0e-08 rev/day^2
Epoch rev: 23604
Checksum: 313

Satellite: D0-17
Catalog number: 20440
Epoch time: 94213.78413741
Element set: 814
Inclination: 98.5988 deg
RA of node: 299.5608 deg
Eccentricity: 0.0012401
Arg of perigee: 58.0788 deg
Mean anomaly: 302.1597 deg
Mean motion: 14.30044782 rev/day
Decay rate: 7.0e-08 rev/day^2
Epoch rev: 23613
Checksum: 309

Satellite: W0-18
Catalog number: 20441
Epoch time: 94213.27050758
Element set: 816
Inclination: 98.5965 deg
RA of node: 299.0502 deg
Eccentricity: 0.0012910
Arg of perigee: 60.7618 deg
Mean anomaly: 299.4853 deg
Mean motion: 14.30018823 rev/day
Decay rate: 1.0e-08 rev/day^2
Epoch rev: 23606

Checksum: 298

Satellite: L0-19

Catalog number: 20442

Epoch time: 94213.73539692

Element set: 812

Inclination: 98.5995 deg

RA of node: 299.7793 deg

Eccentricity: 0.0013267

Arg of perigee: 58.3596 deg

Mean anomaly: 301.8868 deg

Mean motion: 14.30115609 rev/day

Decay rate: $2.1\text{e-}07$ rev/day²

Epoch rev: 23614

Checksum: 336

Satellite: U0-22

Catalog number: 21575

Epoch time: 94213.74571854

Element set: 517

Inclination: 98.4322 deg

RA of node: 287.3167 deg

Eccentricity: 0.0007877

Arg of perigee: 147.7411 deg

Mean anomaly: 212.4257 deg

Mean motion: 14.36925651 rev/day

Decay rate: $1.3\text{e-}07$ rev/day²

Epoch rev: 15962

Checksum: 316

Satellite: K0-23

Catalog number: 22077

Epoch time: 94213.41306658

Element set: 412

Inclination: 66.0808 deg

RA of node: 185.2892 deg

Eccentricity: 0.0015350

Arg of perigee: 275.1393 deg

Mean anomaly: 84.7872 deg

Mean motion: 12.86286851 rev/day

Decay rate: $-3.7\text{e-}07$ rev/day²

Epoch rev: 9260

Checksum: 311

Satellite: A0-27

Catalog number: 22825

Epoch time: 94213.65198693

Element set: 310

Inclination: 98.6511 deg
RA of node: 288.9979 deg
Eccentricity: 0.0009583
Arg of perigee: 74.8438 deg
Mean anomaly: 285.3810 deg
Mean motion: 14.27630722 rev/day
Decay rate: 7.0e-08 rev/day^2
Epoch rev: 4417
Checksum: 335

Satellite: IO-26

Catalog number: 22826
Epoch time: 94214.19032026
Element set: 310
Inclination: 98.6515 deg
RA of node: 289.5766 deg
Eccentricity: 0.0010151
Arg of perigee: 76.1180 deg
Mean anomaly: 284.1130 deg
Mean motion: 14.27735137 rev/day
Decay rate: -9.0e-08 rev/day^2
Epoch rev: 4425
Checksum: 279

Satellite: KO-25

Catalog number: 22830
Epoch time: 94213.62991027
Element set: 315
Inclination: 98.5517 deg
RA of node: 285.7863 deg
Eccentricity: 0.0012449
Arg of perigee: 45.9554 deg
Mean anomaly: 314.2653 deg
Mean motion: 14.28060707 rev/day
Decay rate: -3.5e-07 rev/day^2
Epoch rev: 4418
Checksum: 308

Satellite: 22828

Catalog number: 22828
Epoch time: 94213.76963000
Element set: 288
Inclination: 98.6480 deg
RA of node: 289.1772 deg
Eccentricity: 0.0011104
Arg of perigee: 62.6119 deg
Mean anomaly: 297.6185 deg
Mean motion: 14.28061411 rev/day

Decay rate: -6.0e-08 rev/day^2
Epoch rev: 1228
Checksum: 312

/EX

Date: 5 Aug 94 04:35:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS\$217.MISC.AMSAT
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-217.M
Orbital Elements 217.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM WA5QGD FORT WORTH, TX August 5, 1994
BID: \$ORBS-217.M
TO ALL RADIO AMATEURS BT

Satellite: POSAT
Catalog number: 22829
Epoch time: 94213.63587076
Element set: 303
Inclination: 98.6464 deg
RA of node: 289.0556 deg
Eccentricity: 0.0011121
Arg of perigee: 64.8056 deg
Mean anomaly: 295.4279 deg
Mean motion: 14.28035335 rev/day
Decay rate: 1.7e-07 rev/day^2
Epoch rev: 4418
Checksum: 304

Satellite: MIR
Catalog number: 16609
Epoch time: 94215.25868965
Element set: 695
Inclination: 51.6479 deg
RA of node: 310.9106 deg
Eccentricity: 0.0001314
Arg of perigee: 199.0571 deg
Mean anomaly: 161.0371 deg
Mean motion: 15.56735880 rev/day
Decay rate: 3.454e-05 rev/day^2
Epoch rev: 48335
Checksum: 319

Satellite: HUBBLE
Catalog number: 20580
Epoch time: 94215.55612231
Element set: 514
Inclination: 28.4707 deg
RA of node: 291.6986 deg
Eccentricity: 0.0005951
Arg of perigee: 222.2340 deg
Mean anomaly: 137.7788 deg
Mean motion: 14.90649965 rev/day
Decay rate: 3.76e-06 rev/day^2
Epoch rev: 3646
Checksum: 313

Satellite: GRO
Catalog number: 21225
Epoch time: 94213.54285849
Element set: 122
Inclination: 28.4628 deg
RA of node: 277.2327 deg
Eccentricity: 0.0003053
Arg of perigee: 8.0790 deg
Mean anomaly: 351.9857 deg
Mean motion: 15.41105823 rev/day
Decay rate: 1.811e-05 rev/day^2
Epoch rev: 6394
Checksum: 285

Satellite: UARS
Catalog number: 21701
Epoch time: 94213.60346557
Element set: 562
Inclination: 56.9863 deg
RA of node: 337.0641 deg
Eccentricity: 0.0005480
Arg of perigee: 110.3085 deg
Mean anomaly: 249.8537 deg
Mean motion: 14.96580625 rev/day
Decay rate: 2.536e-05 rev/day^2
Epoch rev: 15773
Checksum: 306

/EX

Date: 5 Aug 94 04:30:00 GMT

From: news-mail-gateway@ucsd.edu
Subject: ORBS\$217.OSCAR.AMSAT
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-217.0
Orbital Elements 217.OSCAR

HR AMSAT ORBITAL ELEMENTS FOR OSCAR SATELLITES
FROM WA5QGD FORT WORTH, TX August 5, 1994
BID: \$ORBS-217.0
TO ALL RADIO AMATEURS BT

Satellite: AO-10
Catalog number: 14129
Epoch time: 94215.22805310
Element set: 295
Inclination: 27.0009 deg
RA of node: 314.8290 deg
Eccentricity: 0.6026240
Arg of perigee: 199.5326 deg
Mean anomaly: 120.6764 deg
Mean motion: 2.05881876 rev/day
Decay rate: -3.02e-06 rev/day^2
Epoch rev: 8375
Checksum: 286

Satellite: UO-11
Catalog number: 14781
Epoch time: 94213.04189469
Element set: 713
Inclination: 97.7856 deg
RA of node: 225.6656 deg
Eccentricity: 0.0012585
Arg of perigee: 122.2499 deg
Mean anomaly: 237.9928 deg
Mean motion: 14.69233978 rev/day
Decay rate: 6.7e-07 rev/day^2
Epoch rev: 55689
Checksum: 367

Satellite: RS-10/11
Catalog number: 18129
Epoch time: 94213.27359705
Element set: 932
Inclination: 82.9271 deg
RA of node: 295.5187 deg
Eccentricity: 0.0010141
Arg of perigee: 260.6002 deg

Mean anomaly: 99.4006 deg
Mean motion: 13.72339573 rev/day
Decay rate: 1.8e-07 rev/day^2
Epoch rev: 35609
Checksum: 298

Satellite: A0-13

Catalog number: 19216
Epoch time: 94215.93255462
Element set: 941
Inclination: 57.7516 deg
RA of node: 238.4314 deg
Eccentricity: 0.7222331
Arg of perigee: 347.2702 deg
Mean anomaly: 1.5691 deg
Mean motion: 2.09718789 rev/day
Decay rate: 3.63e-06 rev/day^2
Epoch rev: 4701
Checksum: 302

Satellite: F0-20

Catalog number: 20480
Epoch time: 94213.43350131
Element set: 710
Inclination: 99.0410 deg
RA of node: 356.7174 deg
Eccentricity: 0.0539898
Arg of perigee: 236.9611 deg
Mean anomaly: 117.8521 deg
Mean motion: 12.83226876 rev/day
Decay rate: -1.8e-07 rev/day^2
Epoch rev: 20993
Checksum: 303

Satellite: A0-21

Catalog number: 21087
Epoch time: 94216.14915277
Element set: 496
Inclination: 82.9459 deg
RA of node: 107.2296 deg
Eccentricity: 0.0034831
Arg of perigee: 313.1016 deg
Mean anomaly: 46.7226 deg
Mean motion: 13.74542801 rev/day
Decay rate: 9.3e-07 rev/day^2
Epoch rev: 17617
Checksum: 303

Satellite: RS-12/13
Catalog number: 21089
Epoch time: 94213.38545202
Element set: 713
Inclination: 82.9223 deg
RA of node: 337.9238 deg
Eccentricity: 0.0029475
Arg of perigee: 346.0088 deg
Mean anomaly: 14.0245 deg
Mean motion: 13.74044083 rev/day
Decay rate: 2.3e-07 rev/day^2
Epoch rev: 17485
Checksum: 294

Satellite: ARSENE
Catalog number: 22654
Epoch time: 94205.08601395
Element set: 267
Inclination: 1.9520 deg
RA of node: 97.7392 deg
Eccentricity: 0.2917162
Arg of perigee: 186.8922 deg
Mean anomaly: 167.2050 deg
Mean motion: 1.42201946 rev/day
Decay rate: -1.42e-06 rev/day^2
Epoch rev: 172
Checksum: 281

/EX

Date: 5 Aug 94 04:34:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS\$217.WEATH.AMSAT
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-217.W
Orbital Elements 217.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM WA5QGD FORT WORTH, TX August 5, 1994
BID: \$ORBS-217.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 94215.73515055

Element set: 901
Inclination: 99.0450 deg
RA of node: 266.7740 deg
Eccentricity: 0.0015871
Arg of perigee: 84.8632 deg
Mean anomaly: 275.4348 deg
Mean motion: 14.13633304 rev/day
Decay rate: 1.17e-06 rev/day^2
Epoch rev: 49697
Checksum: 317

Satellite: NOAA-10
Catalog number: 16969
Epoch time: 94215.76693453
Element set: 797
Inclination: 98.5081 deg
RA of node: 223.3165 deg
Eccentricity: 0.0012845
Arg of perigee: 186.3620 deg
Mean anomaly: 173.7398 deg
Mean motion: 14.24900734 rev/day
Decay rate: 3.6e-07 rev/day^2
Epoch rev: 40927
Checksum: 332

Satellite: MET-2/17
Catalog number: 18820
Epoch time: 94215.49523818
Element set: 356
Inclination: 82.5407 deg
RA of node: 230.9503 deg
Eccentricity: 0.0018360
Arg of perigee: 50.0231 deg
Mean anomaly: 310.2527 deg
Mean motion: 13.84719219 rev/day
Decay rate: 2.8e-07 rev/day^2
Epoch rev: 32890
Checksum: 289

Satellite: MET-3/2
Catalog number: 19336
Epoch time: 94213.59427610
Element set: 309
Inclination: 82.5400 deg
RA of node: 291.5503 deg
Eccentricity: 0.0017190
Arg of perigee: 144.8154 deg
Mean anomaly: 215.4104 deg

Mean motion: 13.16968250 rev/day
Decay rate: 5.1e-07 rev/day²
Epoch rev: 28923
Checksum: 280

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 94215.72629249
Element set: 719
Inclination: 99.1755 deg
RA of node: 205.8097 deg
Eccentricity: 0.0012225
Arg of perigee: 4.3041 deg
Mean anomaly: 355.8230 deg
Mean motion: 14.13007420 rev/day
Decay rate: 7.5e-07 rev/day²
Epoch rev: 30185
Checksum: 279

Satellite: MET-2/18
Catalog number: 19851
Epoch time: 94213.75597542
Element set: 310
Inclination: 82.5213 deg
RA of node: 107.5997 deg
Eccentricity: 0.0015552
Arg of perigee: 95.1060 deg
Mean anomaly: 265.1868 deg
Mean motion: 13.84370156 rev/day
Decay rate: 7.8e-07 rev/day²
Epoch rev: 27399
Checksum: 330

Satellite: MET-3/3
Catalog number: 20305
Epoch time: 94216.17052536
Element set: 106
Inclination: 82.5405 deg
RA of node: 236.7979 deg
Eccentricity: 0.0005331
Arg of perigee: 169.6805 deg
Mean anomaly: 190.4389 deg
Mean motion: 13.04422901 rev/day
Decay rate: 4.4e-07 rev/day²
Epoch rev: 22915
Checksum: 286

Satellite: MET-2/19

Catalog number: 20670
Epoch time: 94213.41003535
Element set: 813
Inclination: 82.5455 deg
RA of node: 172.5483 deg
Eccentricity: 0.0017266
Arg of perigee: 24.6776 deg
Mean anomaly: 335.5206 deg
Mean motion: 13.84189091 rev/day
Decay rate: -2.9e-07 rev/day^2
Epoch rev: 20687
Checksum: 306

Satellite: FY-1/2

Catalog number: 20788
Epoch time: 94215.88224815
Element set: 31
Inclination: 98.8366 deg
RA of node: 234.5011 deg
Eccentricity: 0.0014887
Arg of perigee: 239.5385 deg
Mean anomaly: 120.4308 deg
Mean motion: 14.01350503 rev/day
Decay rate: -1.99e-06 rev/day^2
Epoch rev: 20038
Checksum: 293

Satellite: MET-2/20

Catalog number: 20826
Epoch time: 94213.65208044
Element set: 821
Inclination: 82.5269 deg
RA of node: 109.8175 deg
Eccentricity: 0.0012367
Arg of perigee: 286.6921 deg
Mean anomaly: 73.2884 deg
Mean motion: 13.83587320 rev/day
Decay rate: 9.4e-07 rev/day^2
Epoch rev: 19404
Checksum: 311

Satellite: MET-3/4

Catalog number: 21232
Epoch time: 94213.31479971
Element set: 720
Inclination: 82.5437 deg
RA of node: 137.6981 deg
Eccentricity: 0.0014536

Arg of perigee: 72.5269 deg
Mean anomaly: 287.7438 deg
Mean motion: 13.16463399 rev/day
Decay rate: 5.1e-07 rev/day^2
Epoch rev: 15729
Checksum: 325

Satellite: NOAA-12
Catalog number: 21263
Epoch time: 94215.74541817
Element set: 123
Inclination: 98.6148 deg
RA of node: 242.4707 deg
Eccentricity: 0.0013903
Arg of perigee: 97.3891 deg
Mean anomaly: 262.8867 deg
Mean motion: 14.22434851 rev/day
Decay rate: 1.14e-06 rev/day^2
Epoch rev: 16726
Checksum: 307

Satellite: MET-3/5
Catalog number: 21655
Epoch time: 94216.15247496
Element set: 729
Inclination: 82.5535 deg
RA of node: 82.8772 deg
Eccentricity: 0.0014667
Arg of perigee: 73.7291 deg
Mean anomaly: 286.5437 deg
Mean motion: 13.16832975 rev/day
Decay rate: 5.1e-07 rev/day^2
Epoch rev: 14277
Checksum: 338

Satellite: MET-2/21
Catalog number: 22782
Epoch time: 94213.36733443
Element set: 322
Inclination: 82.5485 deg
RA of node: 170.6331 deg
Eccentricity: 0.0023958
Arg of perigee: 97.1572 deg
Mean anomaly: 263.2315 deg
Mean motion: 13.83011259 rev/day
Decay rate: 4.2e-07 rev/day^2
Epoch rev: 4633
Checksum: 284

/EX

Date: Wed, 3 Aug 94 22:42:00 -0800
From: ihnp4.ucsd.edu!agate!iat.holonet.net!alley.com!john.hiatt@network.ucsd.edu
Subject: Question from a NOVICE
To: info-hams@ucsd.edu

LD>Howdy,
LD>I've had a Novice license since the mid 80's and have recently started to
LD>think about getting a Technician Class License.

LD>I notice that there is now a NO-CODE Tech. License....is there an advantage
LD>to me having passed the 5 wpm test?

LD>I always thought the code test kept HAM from becoming like CB (I've
LD>really been out of touch so if this is a sore issue, please give me some
LD>slack)

LD>Obviously, I have no room to make any comments...all I want know is there a
LD>separate license for Technician with code?

It is called Tech Plus. It gives you all the technician privileges,
which as you may already know is everything above 30 MHz. Having passed
the code test you will also still have access to the novice HF bands
that you are already using. All you need to do to upgrade is pass the
Technician written test.

John

* OLX 2.1 TD * If an experiment works, something has gone wrong.

Date: Thu, 4 Aug 1994 07:33:30 GMT
From: news.Hawaii.Edu!kahuna!jeffrey@ames.arp
Subject: S. California Repeaters
To: info-hams@ucsd.edu

In article <31p5p1\$p21@abyss.West.Sun.COM> myers@Eng.Sun.COM writes:

>

>Goodness, yes. The 147.435 repeater on Saddle Peak meets all of
>your requirements. In fact, it is so heavily used it is often useless.
>Nonetheless, the input is 146.400 and the PL is 103.5 Hz.

What's the history behind the 35 kHz split? Was the PL added due to interference from other sites/services?

Jeff NH6IL

jeffrey@math.hawaii.edu

*****an*ad*appended*to*a*sig?*****
* Stuff for sale: Cordless phone: \$15, Desk phones: \$5ea, Pocket tape *
* player: \$10, Blaupunkt SW radio: \$25, Toaster-oven: \$10 + shipping*

End of Info-Hams Digest V94 #884
